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AUTHOR Burrill, Gail; And Others
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ABSTRACT

The 1989 document, "Curriculum and Evaluation Standards for School Mathematics" (the "Standards"), provides a vision and a framework for revising and strengthening the K-12 mathematics curriculum in North American schools and for evaluating both the mathematics curriculum and students' progress. When completed, it is expected that the Addenda Series will consist of 22 supporting books designed to interpret and illustrate how the vision could be translated into classroom practices. Targeted at mathematics instruction in grades K-6, 5-8, and 9-12, the themes of problem solving, reasoning, communication, and connections are woven throughout the materials, as is the view of assessment as a means of guiding instruction. This book links the content proposed in the "Standards" with current programs by integrating data analysis and statistics with algebra, functions, and geometry. Sixteen activities, as well as exercises, problems, and explorations in a special "Try This" feature, are dispersed throughout the books' eight chapters. The chapters present: (1) why and what kind of statistics are included in the curriculum; (2) an introduction to understanding and representing data; (3) ways of making sense of data; (4) connections between statistics and functions by observing linear relations in graphed data; (5) explorations of nonlinear data; (6) utilization of the chi square statistic to test hypotheses; (7) ideas for both short and extended student projects; and (8) methods of assessing statistical understanding. An appendix provides solutions for and comments on the 16 activities. An annotated bibliography for statistics books, software, and videos includes 21 citations. (MDH)